NUS CORPORATION
A Halliburton Company

FILE COPY

02-8703-50PA

POTENTIAL HAZARDOUS WASTE SITE

PRELIMINARY ASSESSMENT

COMPLETED

Union Carbide Corporation **Site Name**	NYD980532410 **EPA Site ID Number**
400 47th Street Niagara Falls, New York **Address**	02-8703-50 **TDD Number**

Date of Site Visit: 03/25/87

SITE DESCRIPTION

The Union Carbide Corporation is located on 400 47th Street in Niagara Falls, New York. The facility was sold to the Niacet Corporation in 1978. The Union Carbide Corp. produced many chemicals including pesticides during the years of 1926 to 1978. The plant produced a variety of wastes including mercury/aluminum sludge, 2-ethylhexoate, zinc acetate, acetic acid, acetate salts and overflows from the vinyl division. The mercury/aluminum sludge, and the 2-ethylhexoate were stored in 55-gallon drums for a 24-month period and then hauled from the facility. It is not known if the drums were stored properly.

The zinc acetate, acetic acid, acetate salts and overflows from the vinyl division were discharged on a daily basis to the city sewer system to the Niagara Falls Waste Water Treatment Plant.

The Union Carbide facility is located in an industrial area with residential areas on the east and west. A wetland area lies 1000 feet northeast of the site.

PRIORITY FOR FURTHER ACTION: High ____ Medium ____ Low X None ____

RECOMMENDATIONS

A site inspection is recommended on a time available basis. There is a potential for soil, surface water and groundwater contamination from possible improper storage of drums. Sampling of soil, groundwater and surface water may be warranted.

Prepared by: Laura LaForge
of NUS Corporation

Date: 06/01/87

362419

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D980532410

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)
Union Carbide Corporation

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
400 47th Street

03 CITY
Niagara Falls

04 STATE | 05 ZIP CODE | 06 COUNTY | 07 COUNTY CODE | 08 CONG DIST.
NY | 14304 | Niagara | 063 | 29

09 COORDINATES
LATITUDE: 43° 05' 28". N
LONGITUDE: 079° 00' 28". W

10 DIRECTIONS TO SITE (Starting from nearest public road)

New York State Thruway (Rt. 90) to Exit 53, Rt. 190 North to Rt. 62 West (Pine St.) to 47th St., the Niacet building is on the east side of 47th St.

III. RESPONSIBLE PARTIES

01 OWNER (if known)
Niacet Corporation

02 STREET (Business, mailing, residential)
400 47th Street

03 CITY
Niagara Falls

04 STATE | 05 ZIP CODE | 06 TELEPHONE NUMBER
NY | 14304 | (716) 285-1474

07 OPERATOR (if known and different from owner)

08 STREET (Business, mailing, residential)

09 CITY

10 STATE | 11 ZIP CODE | 12 TELEPHONE NUMBER
( )

13 TYPE OF OWNERSHIP (Check one)
X A. PRIVATE ___ B. FEDERAL: _____ (Agency name) ___ C. STATE ___ D. COUNTY ___ E. MUNICIPAL
___ F. OTHER: _____ (Specify) ___ G. UNKNOWN

14. OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

___ A. RCRA 3001 DATE RECEIVED: / / ___ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / /
X C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
X YES DATE: 01 / 27 / 77
___ NO

BY (Check all that apply)
___ A. EPA ___ B. EPA CONTRACTOR X C. STATE ___ D. OTHER CONTRACTOR
___ E. LOCAL HEALTH OFFICIAL ___ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)
X A. ACTIVE ___ B. INACTIVE ___ C. UNKNOWN

03 YEARS OF OPERATION
1925 BEGINNING | 1978 ENDING | ___ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
The plant produced a variety of waste mercury/aluminum sludge, 2-ethylhexoate, zinc acetate, acetate salts and overflows from the vinyl division.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

There is a potential for soil, surface water, and groundwater contamination at this site.

IV. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

___ A. HIGH (Inspection required promptly) ___ B. MEDIUM (Inspection required) X C. LOW (Inspection on time available basis) ___ D. NONE (No further action needed. complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Diana Messina	U.S. EPA Region 2 Edison, NJ	(201) 321-6776

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Laura LaForge	EPA	NUS FIT 2	(201) 225-6160	06 /01 /87

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D980532410

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- _ A. SOLID
- _ B. POWDER, FINES
- X C. SLUDGE
- _ D. OTHER: _____ (Specify)
- _ E. SLURRY
- _ F. LIQUID
- _ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS 273314
- CUBIC YARDS
- NO. OF DRUMS 44

03 WASTE CHARACTERISTICS (Check all that apply)

- _ A. TOXIC
- X B. CORROSIVE
- _ C. RADIOACTIVE
- X D. PERSISTENT
- X E. SOLUBLE
- _ F. INFECTIOUS
- _ G. FLAMMABLE
- _ H. IGNITABLE
- _ I. HIGHLY VOLATILE
- _ J. EXPLOSIVE
- _ K. REACTIVE
- _ L. INCOMPATIBLE
- _ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OCC	2-Ethylhexoate	999	55-gallon drums	1100	gal/yr
MES	Mercury/Aluminum Sludge	999	55-gallon drums	1100	gal/yr
OCC	Acetate Salts	999	City Sewer	31,536,600	gal/yr
ACD	Acetic Acid	64-19-7	City Sewer	36,792,000	gal/yr

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (See specific references, e.g., state files, sample analysis, reports)

NYSDEC Background File.

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION 02 OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION

There is a potential for groundwater contamination from possible improper drum storage. The groundwater is not used for drinking water purposes in this area.

01. X B. SURFACE WATER CONTAMINATION 02 OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 19,242 04 NARRATIVE DESCRIPTION

There is a potential for surface water contamination from possible improper drum storage via rainfall runoff. There is a wetland area 1000 feet to the northeast. The Niagara River is located 1 mile south of the site, but there is no migratory route evident.

01 X C. CONTAMINATION OF AIR 02 OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 40,820 04 NARRATIVE DESCRIPTION

There is a potential for contamination of air from possible improper drum storage.

01. X D. FIRE/EXPLOSIVE CONDITIONS 02 OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4946 04 NARRATIVE DESCRIPTION

There is a slight potential for fire or explosive conditions from chemical processes in operation at the facility.

01. X E. DIRECT CONTACT 02 OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1582 04 NARRATIVE DESCRIPTION

There is a slight potential for direct contact of waste by the workers, if they are in the drum storage area.

01 X F. CONTAMINATION OF SOIL 02 OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 AREA POTENTIALLY AFFECTED: Unknown (ACRES) 04 NARRATIVE DESCRIPTION

There is a potential for contamination of soil at this site, from possible improper drum storage.

01. _ G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination. The City of Niagara Falls receives its drinking water from the Niagara River.

01 X H. WORKER EXPOSURE/INJURY 02 OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 45 04 NARRATIVE DESCRIPTION

There is a potential for worker exposure. The facility is active, using many chemical processes.

01 X I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

There is no potential for population exposure. The facility is completely fenced. The surface water and groundwater are not used in the area surrounding the site.

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X J. DAMAGE TO FLORA — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

There is a potential for damage to flora via rainfall runoff from possible improper drum storage. A wetland area lies 1000 feet northeast of the site.

01 X K. DAMAGE TO FAUNA — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

There is a potential for damage to fauna via rainfall runoff from possible improper drum storage. A wetland area lies 1000 feet northeast of the site.

01 X L. CONTAMINATION OF FOOD CHAIN — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

There is a potential for contamination of the food chain via rainfall runoff from possible improper drum storage. A wetland area lies 1000 feet northeast of the site.

01 X M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1582 — 04 NARRATIVE DESCRIPTION

There is a potential for unstable containment of wastes from possible improper drum storage.

01 X N. DAMAGE TO OFFSITE PROPERTY — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

There is a potential for damage to off-site property via rainfall runoff from possible improper drum storage.

01 X O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

Liquid waste containing acetate salts and acetic acid are discharged to the city sewer and the Niagara Waste Water Treatment Plant on a daily basis.

01 _ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

There is no potential for illegal/unauthorized dumping at this facility. The Niacet property is completely fenced in.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: Unknown

IV. COMMENTS

None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Background File.
Off Site Reconnaissance conducted by NUS on 03/25/87.

APPENDIX A

MAPS AND PHOTOGRAPHS

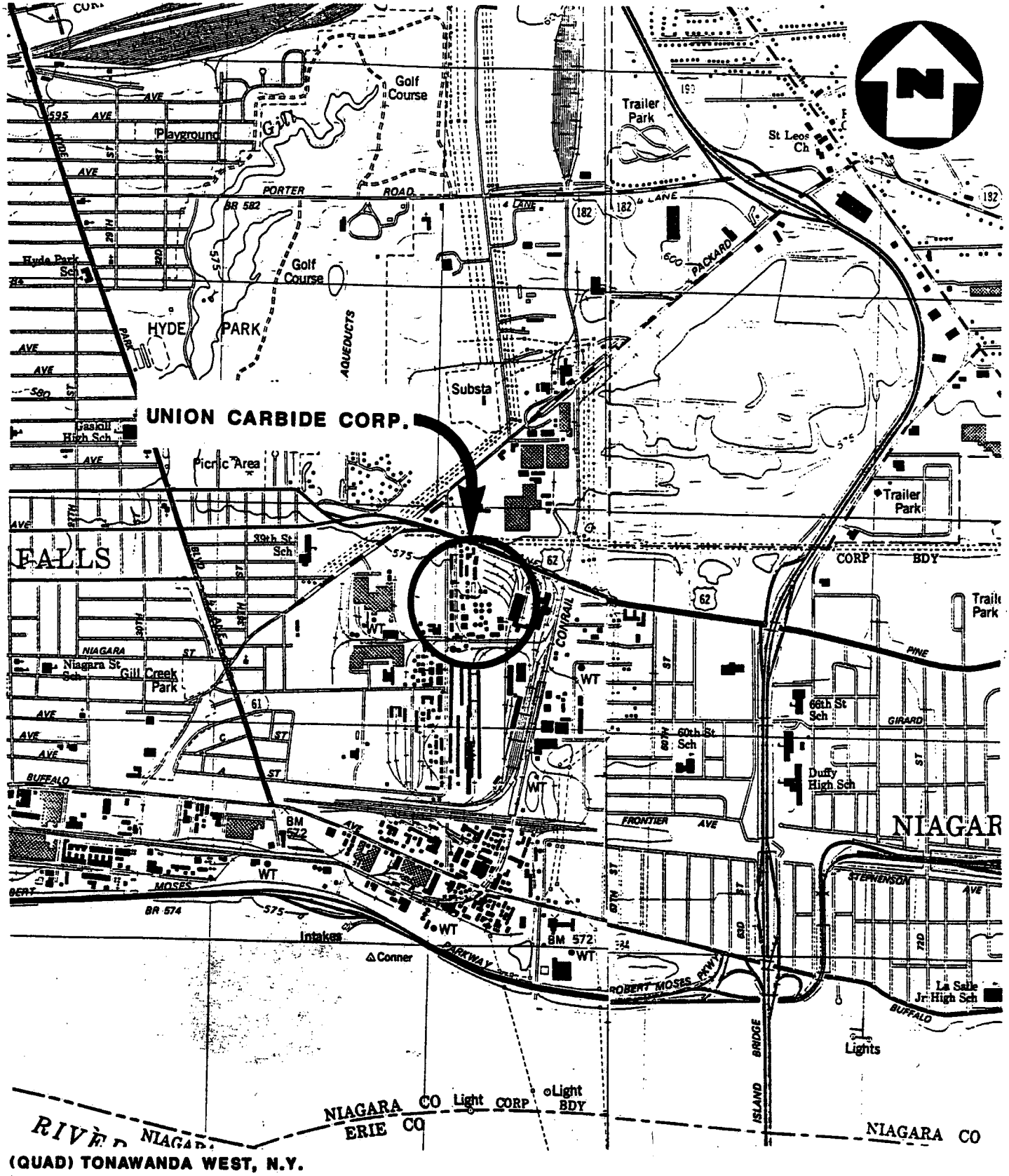

FIGURE 1

SITE LOCATION MAP

UNION CARBIDE CORP., NIAGARA FALLS, N.Y.

SCALE: 1" = 2000'

NUS CORPORATION

A Halliburton Company

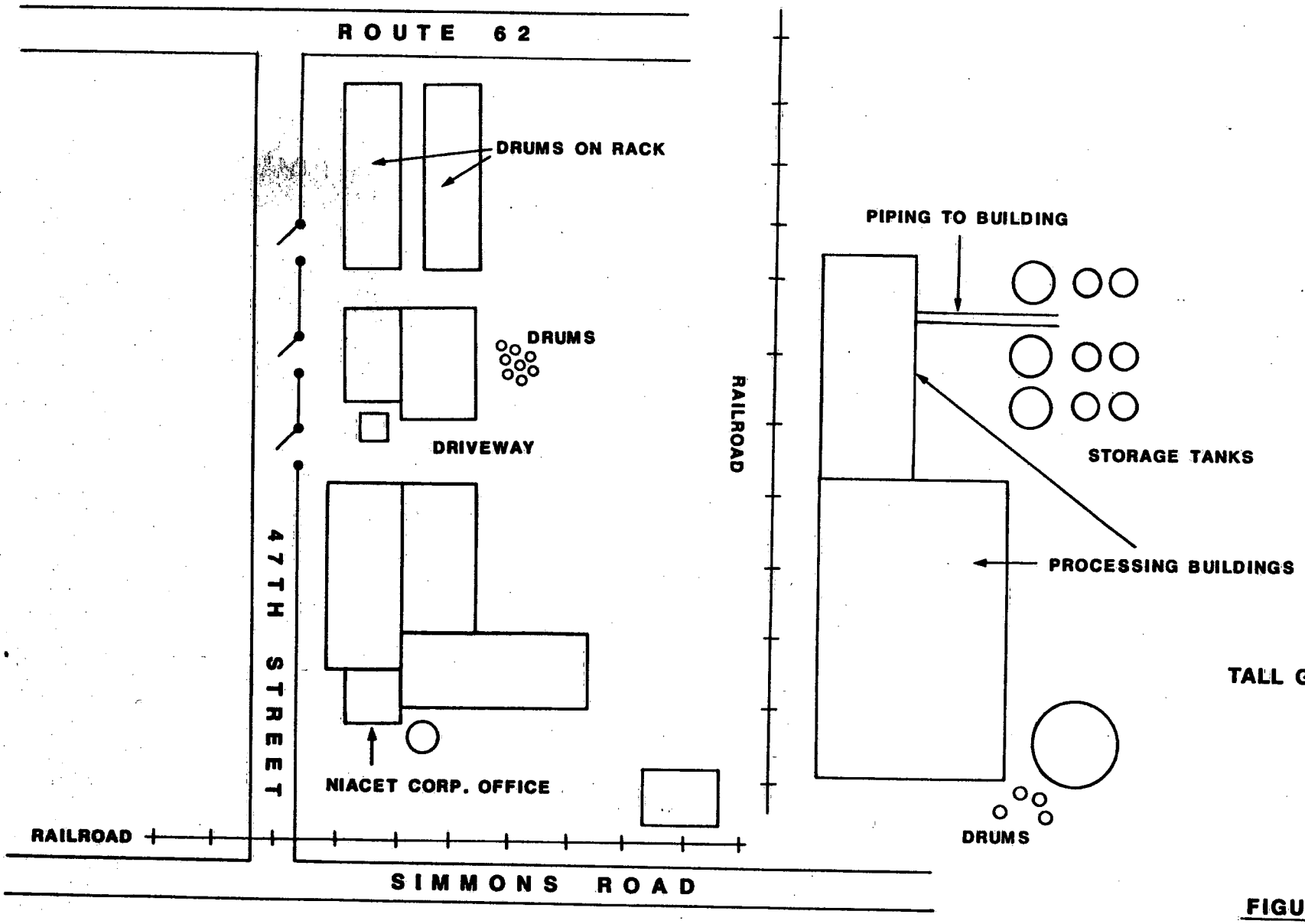

FIGURE 2

SITE MAP
UNION CARBIDE, NIAGARA FALLS, N.Y.

(NOT TO SCALE)

NUS CORPORATION
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UNION CARBIDE CORPORATION
NIAGARA FALLS, NEW YORK
TDD# 02-8703-50
MARCH 25, 1987

PHOTOGRAPH LOG

Union Carbide Corporation
Niagara Falls, New York
TDD# 02-8703-50
March 25, 1987

PHOTOGRAPH INDEX

ALL PHOTOGRAPHS TAKEN BY DAN DE BRUIJN

Photo Number	Description	Time
1P-3	View facing north at back of complex.	11:21
1P-4	View of front office displaying present owners	11:25
1P-5	View of stacked drums behind brick building.	11:31

1P-3 March 25, 1987 11:21
View facing north at back of complex.
Photographer: Dan de Bruijn

1P-4 March 25, 1987 11:25
View of front office displaying present owners.
Photographer: Dan de Bruijn

NUS CORPORATION

UNION CARBIDE CORPORATION, NIAGARA FALLS, NEW YORK

1P-5 March 25, 1987 11:31
View of stacked drums behind brick building.
Photographer: Dan de Bruijn

APPENDIX B

BACKGROUND INFORMATION

(POOR FILE COPY, SOME PAGES MAY BE HARD TO READ.)

itial Mailing 12/27/76 by JED
ial Contact 1/15/77 by JED
ppointment Made 1/18/77 by JED
ite or Phone Visit 1/27/77 by JED
ollow-up / / by
orm Completed 1/27/77 by JED
omments:
2200 lb/yr. aluminum acetate w/ 7-10% Hg
30 gal/yr

Company Code 2 8 1 9 3 . 0 3 4 1

Company Name Union Carbide Corp.
Address Niacet Chemical Division
P.O. Box 68 400 47th St Niagara Falls, 14302
County Niagara Phone (716)-278-3370
SIC Codes 1. 2818 3.
2. 4.

New York State Hazardous Waste Survey
Department of Environmental Conservation
Division of Solid Waste Management
50 Wolf Road, Albany, N.Y. 12233 Telephone: (518) 457-6605

General Information

1. Company Name Union Carbide Chemicals & Plastics
Mailing Address 400 47th St. P.O. Box 68 Niagara Falls 14302
Street City State Zip

Plant Location ☑ Same as above

Street City State Zip

2. If Subsidiary, Name of Parent Company Union Carbide Corp.

3. Individual Responsible for Plant Operations Gary Merz
Name
Plant Manager 278-3370
Title Phone

4. Individual Providing Information Same
Name
Title Phone

5. Department of Environmental Conservation Interviewer John E. Iannotti

6. Standard Industrial Classification (SIC) Codes for Principal Products

Group Name	SIC Code (4 Digit)	Approximate % of Production / Value Added
a. Industrial Organic Chem	2818	100%
b.	(2869)	
c.		
d.		

7. Processes Used at Plant
a. dry chemical reactions
b. sulfations
c.
d.
e.

8. Products
a. acetate salts
b. surfactants
c.
d.
e.

II. Waste Characterization and Management Practice
(Use separate form for each waste stream)

1. Waste Stream No. 1 (from Form I, Number 17)

2. Description of process producing waste aluminum acetate process

3. Brief characterization of waste sludge containing aluminum contaminated with 7-10% mercury.

4. Time period for which data are representative 1-1-76 to 12 31 85

5. a. Annual waste production 1.1 ☑ tons/yr. ☐ gal./yr. (5 drums/yr.)

b. Daily waste production — ☐ tons/day ☐ gal./day

c. Frequency of waste production: ☐ seasonal ☑ occasional ☐ continual

☐ other (specify) _____

6. Waste Composition

a. Average percent solids ____ % b. pH range __ to __

c. Physical state: ☐ liquid, ☐ slurry, ☑ sludge, ☐ solid,

☐ other (specify) _____

d. Component	Average Concentration	☐ wet weight ☑ dry weight	
1. Mercury	7-10	☑ wt.%	☐ ppm
2.		☐ wt.%	☐ ppm
3.		☐ wt.%	☐ ppm
4.		☐ wt.%	☐ ppm
5.		☐ wt.%	☐ ppm
6.		☐ wt.%	☐ ppm
7.		☐ wt.%	☐ ppm
8.		☐ wt.%	☐ ppm
9.		☐ wt.%	☐ ppm
10.		☐ wt.%	☐ ppm

e. Analysis of composition is ☐ theoretical ☐ laboratory ☑ estimate
(attach copy of laboratory analysis if available)

f. Projected ☑ increase, ☐ decrease in volume from base year: 0 % by July 1977;
0 % by July 1983.

g. Hazardous properties of waste: ☐ flammable ☑ toxic ☐ reactive ☐ explosive
☐ corrosive ☐ other (specify) _____

7. On Site Storage

a. Method: ☑ drum, ☐ roll-off container, ☐ tank, ☐ lagoon, ☐ other (specify) _____

b. Typical length of time waste stored 24 ☐ days, ☐ weeks, ☑ months

c. Typical volume of waste stored 2 ☑ tons, ☐ gallons

d. Is storage site diked? ☐ Yes ☑ No

e. Surface drainage collection ☐ Yes ☑ No

8. Transportation

a. Waste hauled off site by ☐ you ☑ others

b. Name of waste hauler Interstate Metal Reclaiming

Address _____ Kearney
Street City

N.J. ( )
State Zip Code Phone

9. Treatment and Disposal

a. Treatment or disposal: ☐ on site ☑ off site

b. Waste is ☑ reclaimed ☐ treated ☐ land disposed ☐ incinerated
☐ other (specify) _____

c. Off site facility receiving waste

Name of Facility Interstate Metal Reclaiming

Facility Operator _____

Facility Location _____ Kearney
Street City

N.J. ( )
State Zip Code Phone

II. Waste Characterization and Management Practice

(Use separate form for each waste stream)

1. Waste Stream No. 2 (from Form I, Number 17)

2. Description of process producing waste Quality Control laboratory analysis for testing samples etc.

3. Brief characterization of waste miscellaneous lab. chemicals

4. Time period for which data are representative Current to _____

5. a. Annual waste production 30 ☐ tons/yr. ☒ gal./yr.

b. Daily waste production — ☐ tons/yr. ☐ gal./yr.

c. Frequency of waste production: ☐ seasonal ☒ occasional ☐ continual

☐ other (specify) _____

6. Waste Composition

a. Average percent solids ____ % b. pH range __ to __

c. Physical state: ☑ liquid, ☐ slurry, ☐ sludge, ☐ solid,

☐ other (specify) _____

d. Component	Average Concentration	☐ wet weight ☐ dry weight	
1. _____	_____	☐ wt.%	☐ ppm
2. _____	_____	☐ wt.%	☐ ppm
3. _____	_____	☐ wt.%	☐ ppm
4. _____	_____	☐ wt.%	☐ ppm
5. _____	_____	☐ wt.%	☐ ppm
6. _____	_____	☐ wt.%	☐ ppm
7. _____	_____	☐ wt.%	☐ ppm
8. _____	_____	☐ wt.%	☐ ppm
9. _____	_____	☐ wt.%	☐ ppm
10. _____	_____	☐ wt.%	☐ ppm

9. Raw materials and other chemicals used in manufacturing processes.

a. acetic acid
b. soda ash (Na carbonate)
c. potassium dichromate
d. zinc oxide
e. aluminum
f. boric acid
g. formic acid
h. 2-ethyl hexanol
i. tetramethylene
j. heptadecanone

10. a. On Site Waste Water Treatment [ ] Yes [✓] No

b. On Site Waste Water Treatment by July 1977 [ ] Yes [✓] No

c. On Site Waste Water Treatment by July 1983 [ ] Yes [✓] No

d. Industrial Sewer Discharge [✓] Yes [ ] No Name of Sewage Treatment Plant City of Niagara Falls
No permit necessary

e. SPDES No. _____ NPDES No. _____

11. a. Air Pollution Control Devices [✓] Yes [ ] No Types scrubbers for vent gases to remove acetic acid; H2O stream w/acetic acid discharged as is to city sewer

b. To Be Built [ ] Yes [✓] No by / /

c. Air 100 Emission Point Registration Numbers _____

12. a. Number of manufacturing employees 45 b. Manufacturing Floor Space 27,000 sq.ft.

13. Attach a plat or sketch of the facility showing the location of on-site process waste storage (if available).

14. Attach flow diagrams of chemical processes including waste flow outputs (if available).

15. In-house waste treatment capabilities: None

16. Is there a currently used or abandoned landfill, dump or lagoon on plant property? [ ] Yes [✓] No

17. Industrial wastes produced or expected to be produced by plant.

1) sludges from waste treatment process
2) Quality Control laboratory waste
3) spillage & wash downs → to sewer
4) gas scrubber [illegible] → to sewer
5)
6)
7)
8)

18. Comments: _____

Neumann Oil Co
NOCO [illegible] → heat, fuel oil
2 tanks

e. Analysis of composition is [ ] theoretical [ ] laboratory [ ] estimate
(attach copy of laboratory analysis if available)

f. Projected [ ] increase, [ ] decrease in volume from base year: _____% by July 1977;
_____% by July 1983.

g. Hazardous properties of waste: [ ] flammable [ ] toxic [ ] reactive [ ] explosive
[ ] corrosive [ ] other (specify) _____

8. On Site Storage

a. Method: [ ] drum, [ ] roll-off container, [ ] tank, [ ] lagoon, [ ] other (specify) _____

b. Typical length of time waste stored _____ [ ] days, [ ] weeks, [ ] months

c. Typical volume of waste stored _____ [ ] tons, [ ] gallons

d. Is storage site diked? [ ] Yes [ ] No

e. Surface drainage collection [ ] Yes [ ] No

9. Transportation

a. Waste hauled off site by [ ] you [ ] others

b. Name of waste hauler _____

Address _____
Street City

( )
State Zip Code Phone

10. Treatment and Disposal

a. Treatment or disposal: [ ] on site [✓] off site

b. Waste is [ ] reclaimed [ ] treated [ ] land disposed [ ] incinerated
[✓] other (specify) discharged as is to city sewer

c. Off site facility receiving waste

Name of Facility Niagara Falls Waste Treatment Plant

Facility Operator _____

Facility Location _____
Street City

( )
State Zip Code Phone

Company Name

II. Waste Characterization & Management Practice

(Use separate form for each waste stream)

1. Waste Stream No. 3 (from Form I, Number 17)

2. Description of process producing waste process spillage & wash downs

3. Brief characterization of waste acetate salts (except aluminum acetate) & surfactants: Types w/o zinc acetate etc.

4. Time period for which data are representative current to

5. a. Annual waste production 31,536,000 ☐ tons/yr. ☑ gal./yr.

b. Daily waste production 86,400 ☐ tons/yr. ☑ gal./day

60 gpm flow rate

c. Frequency of waste production: ☐ seasonal ☐ occasional ☑ continual

☐ other (specify)

6. Waste Composition

a. Average percent solids ____ % b. pH range __ to __

c. Physical state: ☑ liquid, ☐ slurry, ☐ sludge, ☐ solid,

☐ other (specify)

d. Component	Average Concentration	☐ wet weight ☐ dry weight	
1. Soluble COD	500	☐ wt.%	☑ ppm
2. Zinc acetate etc.		☐ wt.%	☐ ppm
3.		☐ wt.%	☐ ppm
4.		☐ wt.%	☐ ppm
5.		☐ wt.%	☐ ppm
6.		☐ wt.%	☐ ppm
7.		☐ wt.%	☐ ppm
8.		☐ wt.%	☐ ppm
9.		☐ wt.%	☐ ppm
10.		☐ wt.%	☐ ppm

Company Code

e. Analysis of composition is /_/theoretical /✓/laboratory /_/estimate
(attach copy of laboratory analysis if available)

f. Projected /_/increase, /_/decrease in volume from base year: _____% by July 1977;
_____% by July 1983.

g. Hazardous properties of waste: /_/flammable /_/toxic /_/reactive /_/explosive
/_/corrosive /_/other (specify) _____

8. On Site Storage

a. Method: /_/drum, /_/roll-off container, /_/tank, /_/lagoon, /_/other (specify) _____

b. Typical length of time waste stored _____ /_/days, /_/weeks, /_/months

c. Typical volume of waste stored _____ /_/tons, /_/gallons

d. Is storage site diked? /_/Yes /_/No

e. Surface drainage collection /_/Yes /_/No

9. Transportation

a. Waste hauled off site by /_/you /_/others

b. Name of waste hauler _____

Address _____
Street City

_____ ( )
State Zip Code Phone

10. Treatment and Disposal

a. Treatment or disposal: /_/on site /✓/off site

b. Waste is /_/reclaimed /_/treated /_/land disposed /_/incinerated
/✓/other (specify) discharged to city sewer.

c. Off site facility receiving waste

Name of Facility Niagara Falls Waste Treatment Plant

Facility Operator _____

Facility Location _____
Street City

_____ ( )
State Zip Code Phone

Company name _____

II. Waste Characterization and Management Practice

(Use separate form for each waste stream)

1. Waste Stream No. 4 (from Form I, Number 17)

2. Description of process producing waste scrubbing of acetic acid from gas stream; the liquid waste stream contains the acetic acid is discharged as is to city sewer.

3. Brief characterization of waste contaminated H2O scrubber waste stream containing acetic acid.

4. Time period for which data are representative current to _____

5. a. Annual waste production 36,792,000 ☐ tons/yr. ☑ gal./yr. 70 gpm flow rate

b. Daily waste production 100,800 ☐ tons/yr. ☑ gal./~~yr~~ day

c. Frequency of waste production: ☐ seasonal ☐ occasional ☑ continual

☐ other (specify) _____

6. Waste Composition

a. Average percent solids ____ % b. pH range __ to __

c. Physical state: ☐ liquid, ☐ slurry, ☐ sludge, ☐ solid,

☐ other (specify) _____

d. Component	Average Concentration	☐ wet weight ☐ dry weight	
1. H_2O + acetic acid		☐ wt.%	☐ ppm
2. soluble COD	1400	☐ wt.%	☑ ppm
3.		☐ wt.%	☐ ppm
4.		☐ wt.%	☐ ppm
5.		☐ wt.%	☐ ppm
6.		☐ wt.%	☐ ppm
7.		☐ wt.%	☐ ppm
8.		☐ wt.%	☐ ppm
9.		☐ wt.%	☐ ppm
10.		☐ wt.%	☐ ppm

e. Analysis of composition is [ ] theoretical [✓] laboratory [ ] estimate
(attach copy of laboratory analysis if available)

f. Projected [ ] increase, [ ] decrease in volume from base year: _____ % by July 1977;
_____ % by July 1983.

g. Hazardous properties of waste: [ ] flammable [ ] toxic [ ] reactive [ ] explosive
[ ] corrosive [ ] other (specify) _____

8. On Site Storage

a. Method: [ ] drum, [ ] roll-off container, [ ] tank, [ ] lagoon, [ ] other (specify) _____

b. Typical length of time waste stored _____ [ ] days, [ ] weeks, [ ] months

c. Typical volume of waste stored _____ [ ] tons, [ ] gallons

d. Is storage site diked? [ ] Yes [ ] No

e. Surface drainage collection [ ] Yes [ ] No

9. Transportation

a. Waste hauled off site by [ ] you [ ] others

b. Name of waste hauler _____

Address _____
Street City

_____ ( )
State Zip Code Phone

10. Treatment and Disposal

a. Treatment or disposal: [ ] on site [✓] off site

b. Waste is [ ] reclaimed [ ] treated [ ] land disposed [ ] incinerated
[✓] other (specify) discharged to city sewer

c. Off site facility receiving waste

Name of Facility Niagara Falls Waste Treatment Plant

Facility Operator _____

Facility Location _____
Street City

_____ ( )
State Zip Code Phone

REPORT ON
CARBIDE AND CARBON CHEMICALS COMPANY - NIACET PLANT
for the
INTERNATIONAL JOINT COMMISSION
United States Public Health Service and Dept. of Health
State of New York

Revised April 2, 1952

A report submitted on March 14, 1949, was revised in a meeting with representatives of the above-mentioned authorities on April 2, 1952.

Historical Background

The Niacet Chemicals Company was formed in 1925 when the Canadian Electro Products Company, Carbide and Carbon Chemicals Corporation, and Roessler and Hasslacher Chemical Company agreed to combine knowledge and skill to manufacture acetaldehyde and related products. Ground was broken for the plant in 1925, and operations were begun in April of the following year. The plant operated on the day shift for five days per week to produce acetaldehyde, paraldehyde, aldol, and crotonaldehyde. In 1928 the production of acetic acid by the oxidation of acetaldehyde was begun. In the period of 1929-30 additional production facilities were added and the operation was put on a shift basis, 24 hours per day, seven days per week. The manufacture of sodium acetate and other acetates was begun in 1935. Additional aldehyde capacity was added in 1936. The production of vinyl acetate was begun in 1937, and in 1941 the capacity was increased. In 1945 the Niacet Chemicals Company was made the Niacet Chemicals Division of U. S. Vanadium Corporation. In 1948 a further addition was made to the vinyl acetate capacity. In 1951 the Niacet Chemicals Division became the Niacet Plant of the Carbide and Carbon Chemicals Company. Early in 1951 a further addition was made to the vinyl acetate capacity. At about the same time the idle Carbide and Carbon Chemicals Company methanol plant was added to the Niacet Plant and the dry ice plant was sold to Pure Carbonic Company. A fumigant known as Carboxide is manufactured in the old methanol plant. On April 1, 1952, the production of acetaldehyde and acetic acid was discontinued.

Products

The following products are manufactured at the Niacet Plant for sale:

Principal Products

Acetonitrile
Aldol
Aluminum Boro Acetate
Carboxide
Copper Acetate
Paraldehyde
Potassium Acetate
Sodium Acetate
Succinic Acid
Sucrose Octa Acetate
Vinyl Acetate
Zinc Acetate

Products Produced in Pilot Plant Quantities

Aldehyde Ammonia

Raw Materials

Principal Raw Materials

Acetaldehyde
Acetic Acid
Acetylene Gas
Aluminum Ingots
Anhydrous Ammonia
Carbon Dioxide
Cupric Oxide
Ethylene Oxide
Nitric Acid
Potassium Hydroxide
Soda Ash
Sodium Hydroxide
Crude Succinic Anhydride
Sugar
Zinc Oxide

Raw Materials Used in Smaller Quantities

Acetic Anhydride
Albone (Hydrogen Peroxide)
Boric Acid
Calcium Chloride
Carbon (Activated)
Formic Acid
Sodium Dichromate
Sodium Sulfide
Sulfan (100% SO_3)
Sulfuric Acid

Hydroquinone and diphenylamine are used to stabilize vinyl acetate before shipment.

Mercury salts are used as catalyst.

Steam is produced using carbon monoxide, coal, or fuel oil as fuel. When available the carbon monoxide is used, and coal is usually used to carry the rest of the load. Fuel oil is used only in cases of emergency. Fuel oil is used to fire three small heaters or furnaces in the plant, but the quantities used are relatively small.

Water Supply

All water used in the plant comes from the city water system. Most of this water is added to the cooling water system. This cooling water is recycled through a cooling tower where it is cooled by evaporation. Whenever water is to be added to a process it is piped from the cooling water system.

Not enough time has elapsed since the production of aldehyde and acetic acid has been discontinued for us to take any measurements of water usage.

Liquid Wastes

We have no information on the liquid wastes we shall be putting into the city sewer from now on. We know that our aldehyde still slops and settling tank overflows will be cut off. The acetylene purification wastes will be reduced to about 1500 gal. per day and they will contain approximately 700 lb. per day of ammonium sulfate. The Vinyl Division overflows will be reduced to about 40 gal. per minute.

Water Balance

With the information we have obtained thus far on our reduced rate of operation, we cannot make up a water balance.

Analysis of the Total Liquid Waste Flow From the Plant

When our operations have stabilized we plan to make an analysis ofour liquid wastes.

The flows of zinc to the system are intermittent. At intervals of about six months it is necessary to dump approximately 200 gallons of zinc acetate mother liquor containing 600 lb. of zinc acetate. This dumping usually requires about one hour.

The leaching operation which produced waste zinc acetate has been discontinued.

Solid Wastes

The principal solid wastes are ash from the boilers and mercury furnace residues. These materials are hauled from the plant for use as fill. Occasionally carbon is removed from vessels where it has been deposited by organic decomposition. This carbon is removed from the premises by a trucker, and we believe he has arrangements with the city to place it on the city dumping grounds.

Proposed changes in Liquid Waste Treatment

There are no plans for treating liquid wastes and will be none until our operation is stabilized and we know what changes are indicated.

Size of the Plant

The total number of employees is 356. The work day is 8-4, 4-12, and 12-8 for shift workers and 8:00 to 4:30 for day workers. There are about 30 men on each shift. All men work a 40-hour week.

Most operations are continuous. This plant is considered to be of medium size.

The plant area is 19.99 acres.

Location and Flow in Sewers

The most recent sewer plan of the Niacet Plant is Drawing AX 84. Even though this drawing is not strictly accurate, it does show the connections to the city sewer accurately.

The two 18 inch sewer lines entering the city sewer at manholes "A" serve the same purpose. The line entering at "A" was constructed when the line entering at "B" became partially blocked under the storage tank farm. The principal flows handled in this line are:

Location and Flow in Sewers (contd.)

1. Still Building wash water
2. Wash water from Buildings 1 and 1-A
3. Sanitary wastes
4. Water from container washing
5. Miscellaneous small flows

The 12 inch sewer line entering the city sewer at manhole "C" handles the following flows:

1. Acetylene purification wastes
2. Vinyl Division overflows
3. Miscellaneous small flows

The flow into manhole "D" from the 6 inch sewer is very small and consists primarily of sanitary sewage from a locker room accommodating about 80 men.

At the south west corner of the methanol plant there is a 24 inch sewer line which enters the city system near the railroad crossing on 47th Street. This line carries sanitary sewage from that portion of the plant and waste water from the gas cylinder washing operation.

J.S.Burdick:RH
April 8, 1952

INTERAGENCY TASK FORCE ON HAZARDOUS WASTES
M.P.O. Box 561
Niagara Falls, New York 14302
(716) 285-3057

I. General Information

1. Company Name: Union Carbide Corporation (UCC)

Mailing Address: 270 Park Avenue (Street), New York (City), NY (State), 10017 (Zip)

Present Plant Location: The NIACET Corporation was a plant in the Chemicals and Plastics Division of UCC from 1930-June, 1978.

47th Street & Pine Avenue (Street), Niagara Falls (City), N.Y. (State), 14302 (Zip)

2. If Subsidiary or Division, Name of Parent Company: UCC (1930-June, 1978)

3. Person Responsible for Present Plant Operations
   Name: Mr. M. R. Brannen, President
   Title: NIACET Corporation
   Telephone: 716- 285-1474

4. Person Answering this Questionnaire
   Name: M. E. Hall, Staff Engineer
   Title: UCC, Chemicals & Plastics
   Telephone: South Charleston, WV 25303 304- 747-2307

II. Company History

Union Carbide Corporation

1. Date Company Founded: 1917

   Date and State of Incorporation: 1917 - New York

   Date Company Began Operations in Erie or Niagara County: 1925 (NIACET Plant)

2. Other Company Names since 1930 (specify time periods): Carbide and Carbon Corporation until 1957.

3. Other Plant Locations in Erie or Niagara County since 1930 (specify locations and time periods): Refer to documents submitted by UCC Linde and Metals Divisions.

4. Names of Companies Acquired which have Operated Plants in Erie or Niagara County since 1930 (specify name of company, date of acquisition, location of plant, and periods of operation): None acquired since 1930.

III. Company Personnel

1. Identify all plant managers from 1930 to present. Indicate years of service in that position, last known address and telephone number.

2. Identify all plant purchasing agents from 1930 to present. Indicate years of service in that position, last known address and telephone number.

3. Identify all plant personnel with supervisory responsibility for treatment or disposal of industrial wastes from 1930 to present. Indicate years of service, last known address and telephone number.

IV. Industrial Waste Production, Treatment and Disposal

(* 1) 1. Processes Used at Plant (1930-1975)

	Dates (Approximate)
a. Acetylene Hydration (Hg catalyst)	a. 1925-1950
b. Acetaldehyde Oxidation (Hg catalyst)	b. 1930-1955
c. Acetylene/Acetic Acid Addition (Hg catalyst)	c. 1940-1959
d. Acetate Salts	d. 1930-6/1978
e. Sulfonation (Alcohols)	e. 1957-6/1978

(More on Attachment 2)

(*1) 2. Products (1930-1975)

a. Acetaldehyde	a. 1925-1950
b. Acetic Acid	b. 1930-1955
c. Vinyl Acetate	c. 1940-1959
d. Metallic Acetate Salts	d. 1930-1978
e. Anionic Tergitols	e. 1957-1978

(More on Attachment 2)

3. On Site Waste Treatment (1930-1975)

a. Mercury Recovery	a. 1925-6/1978
b.	b.
c.	c.
d.	d.
e.	e.

4. List all Waste Haulers since 1930 including Your Company

Name NEWCO Chemical Waste Systems, Inc.

Address 4626 Royal Avenue, Niagara Falls, NY 14303
Street City State

Telephone (716) 285-6944

Name

Address
Street City State

Telephone

(*1) Products listed in a through e under 2 correspond to the respective letters under 1.

5. Identify all Treatment or Disposal Sites in Erie or Niagara County used since 1930 (use separate sheet for each site).

a. Name of Site NEWCO Chemical Waste Systems, Inc.

b. Location 4626 Royal Avenue, Niagara Falls, N.Y. 14303

c. Owner or Operator

d. Time Period Site was Used 1978

e. Describe Waste Types Treated or Disposed at this Site	Physical State	Total Quantity	Type of Container If Any
(1) Mercury/aluminum sludge	Semi-solid	1100 Gal.	Drums (55 gal.)
(2) 2-Ethylhexoate	Liquid	1100 Gal.	Drums (55 gal.
(3)			
(4)			
(5)			

f. Wastes Were [ ] land disposed [ ] incinerated [X] reclaimed [ ] treated [ ] other (specify)

g. Names of waste haulers including your company transporting such wastes to this site, if a disposal site.

NEWCO Chemical Waste Systems, Inc. (716) 285-6944
Name Telephone

4626 Royal Avenue, Niagara Falls NY 14303
Street City State

Time Periods such Hauler Transported to this Site 1978

Name Telephone

Street City State

Time Periods such Hauler Transported to this Site

h. List Names and Addresses of other Companies using this Site, if a disposal site.

Name of Company

Street City State

Time Periods such Other Company Used this Site

V. Sources of Information

Please indicate the sources of all information set forth in response to Questions IV. 4 and IV. 5 above. (Specify names of individuals and sources).

Mr. G. C. Merz
UCC, Chemicals and Plastics
P. O. Box 8361
South Charleston, WV 25303

Mr. Merz was the plant manager during the period that wastes were disposed of at NEWCO.

ATTACHMENT 1

III. Company Personnel

1 - Plant Manager	Approx. Service Date	Address	Telephone
O. C. Thompson	1947-1953	4 Marina Terrace, Treasure Island, FL 33706	
W. W. Heidenreich	1953-1957	Toby Lane Farm, East Corinth, VT 05040	
H. Coons	1957-1960	Deceased	
A. T. Anderson	1960-1962	41 Meadow Lane, Chappaqua, NY 10514	
D. Rupert	1962-1965	1148 S. Oakhurst Road, Apt. 11-112, Largo, FL 33540	
J. S. Burdick	1965-1976	234 Parkhurst Blvd., Kenmore, NY 14223 — 832-5542	
G. C. Merz	1976-1978	UCC, P. O. Box 8361, South Charleston, WV 25303	(304) 747-5253

2 - Purchasing Agent			
F. McMahon	1930-1962	Deceased	
D. Jenkins	1962-1964	UCC, 270 Park Avenue, New York, NY 10017	(212) 551-2345
W. Wysocki	1964-1966	UCC, Metals, P. O. Box 97, Niagara Falls, NY 14302	(716) 278-3733
W. Chapin	1966-1976	Deceased	
W. E. Flint	1976-1978	UCC, Metals, P. O. Box 66, Niagara Falls, NY 14302	(716) 278-3232

3 - Plant Supervisory Personnel Responsible for Waste Management

Plant managers were responsible for industrial waste management.

ATTACHMENT 2

(Continued from Page Two of Questionnaire)

IV. INDUSTRIAL WASTE PRODUCTION, TREATMENT AND DISPOSAL

1. Processes Used at Plant (1930-1975)	Dates (Approximate)
f. Epoxylation of cellulose pulp	1953-1965
g. High-pressure hydrogenation of CO	1928-1950

Each of the following ran about 6 mo. each during 1953-1959:

h. Acetic acid + cobalt carbonate
i. Urea + chloral
j. Dichlorophenol + ethylene oxide
k. UCC SEVIN process
l. Calcium propionate + sodium

2. Products (1930-1975)	Dates (Approximate)
f. Hydxoxyethyl cellulose	1953-1965
g. Methanol	1928-1950
h. Cobalt acetate (6 Mo.)	1953-1959
i. Dichloral urea (6 Mo.)	" "
j. Mylone fungicide (6 Mo.)	" "
k. Insecticide SEVIN (6 Mo.)	" "
l. Propionic acid (6 Mo.)	" "

NIACET CORPORATION
47th STREET and PINE AVENUE
NIAGARA FALLS, NEW YORK 14302

Telephone 716-285-1474

November 1, 1978

Ms. J. Schreiber
INTERAGENCY TASK FORCE
ON HAZARDOUS WASTES
M.P.O. Box 561
Niagara Falls, N.Y. 14302

Dear Ms. Schreiber:

Attached is the Task Force questionnaire for the Niacet Corporation. The information we are able to supply has been filled in. However, this plant was sold by Union Carbide to Niacet Corporation on June 7, of this year. Therefore, Union Carbide will have to supply the bulk of the information which you request for this location.

Union Carbide has agreed to complete the questionnaire and has provided us with the contact:

Mr. Ed Hall
Union Carbide Tech Center
P.O. Box 8361
S. Charleston, W. VA 25303
304/747-2307

Please refer any questions concerning this plant prior to June 1978 to Mr. Hall.

Very truly yours,

NIACET CORPORATION

J. A. Rothrock

J. A. Rothrock
Plant Manager

JAR:jm
cc: Mr. Ed Hall
Mr. Ron Van Mynen-NYC

NOV 2 1978

INTERAGENCY TASK FORCE ON HAZARDOUS WASTES
M.P.O. Box 561
Niagara Falls, New York 14302
(716) 285-3057

I. General Information

1. Company Name NIACET CORPORATION

Mailing Address P.O. Box 1034, Niagara Falls New York 14302
Street City State Zip

Present Plant Location ☐ Same as Above

400 - 47th Street Niagara Falls New York 14302
Street City State Zip

2. If Subsidiary or Division, Name of Parent Company _____

3. Person Responsible for Present Plant Operations John A. Rothrock
Name

Plant Manager 285-1479
Title Telephone

4. Person Answering this Questionnaire John A. Rothrock
Name

_____
Title Telephone

II. Company History

1. Date Company Founded Purchased from Union Carbide June 6, 1978

Date and State of Incorporation April 20, 1978 - New York

Date Company Began Operations in Erie or Niagara County June 6, 1978

2. Other Company Names since 1930 (specify time periods) Union Carbide Chemicals & Plastics Division (prior to sale)

3. Other Plant Locations in Erie or Niagara County since 1930 (specify locations and time periods) _____

4. Names of Companies Acquired which have Operated Plants in Erie or Niagara County since 1930 (specify name of company, date of acquisition, location of plant, and periods of operation). _____

III. Company Personnel

1. Identify all plant managers from 1930 to present. Indicate years of service in that position, last known address and telephone number.

2. Identify all plant purchasing agents from 1930 to present. Indicate years of service in that position, last known address and telephone number.

3. Identify all plant personnel with supervisory responsibility for treatment or disposal of industrial wastes from 1930 to present. Indicate years of service, last known address and telephone number.

IV. Industrial Waste Production, Treatment and Disposal

1. Processes Used at Plant (1930-1975) — Dates

a. _____ a. _____

b. _____ b. _____

c. _____ c. _____

d. _____ d. _____

e. _____ e. _____

2. Products (1930-1975)

a. _____ a. _____

b. _____ b. _____

c. _____ c. _____

d. _____ d. _____

e. _____ e. _____

3. On Site Waste Treatment (1930-1975)

a. _____ a. _____

b. _____ b. _____

c. _____ c. _____

d. _____ d. _____

e. _____ e. _____

4. List all Waste Haulers since 1930 including Your Company

Name _____

Address _____
Street City State

Telephone _____

Name _____

Address _____
Street City State

Telephone _____

5. Identify all Treatment or Disposal Sites in Erie or Niagara County used since 1930 (use separate sheet for each site).

a. Name of Site _____

b. Location _____

c. Owner or Operator _____

d. Time Period Site was Used _____

e.

Describe Waste Types Treated or Disposed at this Site	Physical State	Total Quantity	Type of Container, If Any
(1)			
(2)			
(3)			
(4)			
(5)			

f. Wastes Were ☐ land disposed ☐ incinerated ☐ reclaimed ☐ treated ☐ other (specify)_____

g. Names of waste haulers including your company transporting such wastes to this site, if a disposal site.

_____
Name Telephone

_____
Street City State

Time Periods such Hauler Transported to this Site _____

_____
Name Telephone

_____
Street City State

Time Periods such Hauler Transported to this Site _____

h. List Names and Addresses of other Companies using this Site, if a disposal site.

_____
Name of Company

_____
Street City State

Time Periods such Other Company Used this Site _____

V. Sources of Information

Please indicate the sources of all information set forth in response to Questions IV. 4 and IV. 5 above. (Specify names of individuals and sources).